

Amendments to the Claims:

Claim 1 (Currently amended). A method of synthesizing at least part of a copy protection signal ~~enhancing the chroma distortion~~ in a video signal wherein ~~which simultaneously is attenuated by a basic anti-copy protection signal~~, the video signal includes ~~formed of~~ video lines having horizontal blanking intervals including horizontal sync, front porch and back porch areas of respective normal levels, and a normal color burst area ~~signal~~, comprising the steps of:

lowering the level of a selected portion or portions of the end of a video line and or of the horizontal blanking interval to a value lower than said respective normal level of the selected portion or portions;

~~providing a sample signal in response to the lowered level in the selected portion; and~~
inserting a color burst signal of incorrect phase or frequency in a second portion of the horizontal blanking interval; and

wherein the second portion is spatially arranged in respect of the selected portion or portions such that an attenuation and or darkening effect caused by a basic copy protection signal causes a recorder or television set to sense the lowered portion or portions to cause the recorder or television set ~~sample signal~~ to sample or sense the incorrect color burst signal ~~rather than the normal color burst signal~~, thereby generating color to effect the enhancement of the chroma distortion in the recorder or television set.

Claim 2 (Currently amended). The method of claim 1 wherein the incorrect color burst signal is added to at least a portion of the horizontal sync signal and/or to at least a portion of the back porch area so as to enable the sampling or sensing of the incorrect color burst signal.

Claim 3 (Currently amended). The method of claim 2 wherein the incorrect color burst signal is added to ~~the~~ at least a portion of a horizontal sync signal pulse, and the selected portion which is lowered in level is in at least a portion of the front porch area or in a portion of the active video toward the end of a video line.

Claim 4 (Currently amended). The method of claim 2 wherein the incorrect color burst signal is added to a ~~the~~ back porch area, and the selected portion which is lowered in level is a post pseudo sync signal inserted in a portion of the back porch area prior to the incorrect color burst signal.

Claim 5 (Currently amended). The method of claim 2 wherein:
the incorrect color burst signal is added to the horizontal sync signal, and the selected portion which is lowered in level is a post pseudo sync signal on ~~the~~ a back porch area following the incorrect color burst signal and immediately adjacent ~~the~~ a beginning of the respective active video line; and

the post pseudo sync signal and the beginning of the active video line form a pseudo sync/automatic gain control (AGC) pulse pair.

Claim 6 (Original). The method of claim 2 including:
superimposing a positive pulse on the front porch area prior to the horizontal sync signal;
wherein the selected signal which is lowered in level is a portion of the front porch area;
and

wherein the lowered front porch portion and the positive pulse form a pseudo sync/automatic gain control (AGC) pulse pair.

Claim 7 (Currently amended). The method of claim 2 wherein the selected portion which is lowered in level comprises the end of ~~the~~ a video line and or at least a part of the front porch area.

Claim 8 (Original). The method of claim 2 including:
generating an average picture level (APL) signal indicative of the instant average picture level; and
varying the amount that the selected portion is lowered in response to the APL signal.

Claim 9 (Currently amended). The method of claim 8 wherein the level of a portion of the front porch area or of the end of a video line is varied in response to the APL signal.

Claim 10 (Currently amended). The method of claim 8 wherein the level of a post pseudo sync signal added to ~~the~~ a back porch area is varied in response to the APL signal.

Claim 11 (Original). The method of claim 2 including:
selecting the video lines of the video signal in which the chroma distortion enhancement is applied.

Claim 12 (Currently amended). The method of claim 2 wherein the level is lowered in a range of from blanking level to ~~through~~ a level of -30 IRE.

Claim 13 (Currently amended). The method of claim 2 wherein the level is dynamically varied ~~through~~ within a range of a few IRE above blanking level to -30 IRE ~~at a selected fixed or random frequency.~~

Claim 14 (Currently amended). The method of claim 2 including:
expanding the duration of ~~the~~ a horizontal blanking interval; ~~and~~
~~inserting an incorrect color burst signal in a portion of the front porch area following the lowered level in the selected portion.~~

Claim 15 (Currently amended). A method of synthesizing at least a part of a copy protection signal ~~enhancing the chroma distortion~~ in a video signal wherein which ~~simultaneously is attenuated by a basic anti-copy protection signal~~, the video signal includes ~~being formed of~~ video lines having ~~including~~ horizontal blanking intervals ~~with normal levels of horizontal sync, front porch and back porch and a normal color burst, comprising the steps of:~~

lowering the normal level of a portion or portions of the end of the video line and or of the horizontal blanking interval prior to the horizontal sync to cause an erroneous early scan of the video line;

adding a color burst of incorrect phase or frequency to the horizontal sync following the lowered portion or portions; and

causing a recorder or television set to sample or sense the lowered portion or portions to cause the sampling or sensing of sampling the incorrect color burst in response to the erroneous early scan, thereby generating color so as to cause the enhanced chroma distortion in the recorder or television set.

Claim 16 (Currently amended). The method of claim 15 wherein the portion which is lowered in level comprises a portion of ~~the~~ a front porch.

Claim 17 (Original). The method of claim 16 including:
adding a positive pulse to the front porch prior to the horizontal sync, wherein the lowered front porch portion and the positive pulse form a pseudo sync/automatic gain control (AGC) pulse pair.

Claim 18 (Currently amended). The method of claim 16 wherein the incorrect color burst also is added to a first portion of the back porch prior to ~~the normal~~ a color burst.

Claim 19 (Currently amended). A method of synthesizing at least a part of a copy protection signal ~~enhancing the chroma distortion~~ in a video signal wherein which ~~simultaneously is attenuated by a basic anti-copy protection signal~~, the video signal includes ~~being formed of~~ video lines having including horizontal blanking intervals with normal levels of ~~horizontal sync~~, front porch and back porch, and a normal color burst area, comprising ~~the steps~~ of:

lowering the normal level of a portion or portions of the back porch to define a pseudo horizontal sync which causes an erroneous late scan of the video line;

adding a color burst of incorrect phase or frequency to the back porch following the lowered pseudo horizontal sync; and

causing a recorder or television set to sample or sense the lowered portion or portions to cause the sampling or sensing of sampling the incorrect color burst in response to the erroneous late scan, thereby generating color so as to cause the enhanced chroma distortion in the recorder or television set.

Claim 20 (Original). The method of claim 19 wherein the pseudo horizontal sync is added adjacent the beginning of the active video line to define a pseudo sync/automatic gain control (AGC) pulse pair.

Claim 21 (Original). The method of claim 19 including:

adding a color burst of incorrect phase or frequency to the normal horizontal sync.

Claim 22 (Currently amended). A method of synthesizing at least a part of a copy protection signal ~~enhancing the chroma distortion~~ in a video signal wherein which ~~simultaneously is attenuated by a basic anti-copy protection signal~~, the video signal includes ~~being formed of~~ video lines having including horizontal blanking intervals with normal levels of ~~horizontal sync~~, front porch and back porch, and a normal color burst area, comprising ~~the steps~~ of:

lowering a portion or portions of the horizontal blanking interval prior to the horizontal sync to cause an erroneous early scan of selected video lines;

adding a color burst of incorrect phase or frequency to the horizontal sync;

lowering a portion or portions of the back porch following the normal color burst to define a pseudo horizontal sync to cause an erroneous late scan of selected video lines;

adding a color burst of incorrect phase or frequency to the back porch following the pseudo horizontal sync;

determining the average picture level of a field of the video lines;

adjusting the lowered levels of the portion or portions of the horizontal blanking level and or of the pseudo horizontal sync in response to the average picture level; and

thereby causing a recorder or television set to sample or sense ~~sampling~~ the respective incorrect color burst in response to the erroneous early scan or the erroneous late scan depending upon the average picture level and the correspondingly adjusted lowered levels.

Claim 23 (Currently amended). Apparatus for synthesizing at least a part of a copy protection signal ~~enhancing the chroma distortion~~ in a video signal during reproduction of an illegal copy, wherein the video signal includes ~~also is attenuated by a basic anti-copy protection signal, the video signal including~~ video lines having horizontal blanking intervals with normal levels of ~~horizontal sync~~, front porch and back porch, and a normal color burst area, comprising:

circuitry for lowering the level of a selected portion or portions of the end of a video line and or of a horizontal blanking interval to below the normal level;

~~a gate logic circuit for supplying a sample signal in response to the selected portion of lowered level;~~

~~subcarrier~~ generator/combining circuits for supplying a color burst of incorrect phase or frequency in a further portion of the horizontal blanking interval; and

wherein said further portion is positioned in respect of the selected portion or portions such that an attenuation and or darkening effect caused by a basic copy protection signal causes a recorder or television set to sense the lowered portion or portions to cause the recorder or television set to sample or sense ~~sampling by the sample signal of the incorrect color burst rather than of the normal color burst,~~ thereby generating color so as to cause the enhancement of the chroma distortion in the recorder or television set.

Claim 24 (Original). The apparatus of claim 23 wherein the circuitry include:

a first voltage source for lowering the normal level of a portion of the front porch to... provide a modified front porch signal.

Claim 25 (Currently amended). The apparatus of claim 24 wherein the circuitry further include:

a second voltage source for providing a post pseudo sync signal of lowered level during an area of a ~~the~~ back porch.

Claim 26 (Currently amended). The apparatus of claim 23 including a ~~wherein the~~ gate logic circuit is responsive to selected sync signals for also producing ~~incorrect~~ pre sync and or post sync color burst gate signals.

Claim 27 (Currently amended). The apparatus of claim 26 wherein the ~~subcarrier~~ generator/combining circuits include:

an oscillator or generator for supplying ~~color burst~~ signals of the incorrect phase or frequency; and

a combining circuit for combining with the video signal, selected signals of a the modified front porch ~~signal~~, the end of a video line, the post pseudo sync ~~signal~~ and/or the incorrect color burst in response to the ~~incorrect~~ pre sync and or post sync color burst gate signals, to cause the color enhanced chroma distortion in the recorder or television set video ~~signal~~.

Claim 28 (Currently amended). The apparatus of claim 27 wherein the gate logic circuit include:

a pulse generating circuit for providing a sync related signal in response to the sync signals;

a first timing one-shot ~~circuits~~ responsive to the sync related signal for providing the ~~incorrect~~ pre sync color burst gate signal;

a second timing one-shot ~~circuits~~ responsive to the sync signals for providing the ~~incorrect~~ post sync color burst gate signal; and

wherein the combining circuit includes logic circuits responsive to the first and second timing one-shot ~~circuits~~ and the oscillator for providing pre sync color burst and post sync color burst signals of the incorrect phase or frequency as determined by the ~~incorrect~~ pre sync and post sync color burst gate signals, respectively.

Claim 29 (Currently amended). The apparatus of claim 28 wherein the first timing one shot circuits includes the pulse generating circuit for providing the sync related signal, a third timing one-shot circuit and a pre sync gate circuit for providing the ~~incorrect~~ pre sync color burst gate signal.

Claim 30 (Currently amended). The apparatus of claim 28 wherein the second timing one-shot circuits includes a pair of one shots, and a post sync gate circuit for providing the ~~incorrect~~ post sync color burst gate signal.

Claim 31 (Original). The apparatus of claim 30 wherein the means for providing a post pseudo sync signal include:

- a switch;

- a second voltage source coupled to an input of the switch; and

- the switch being responsive to the pair of one shots for providing the post pseudo sync signal following the normal color burst on the back porch.

Claim 32 (Currently amended). The apparatus of claim 26 wherein the combining circuit includes:

- an AND gate receiving the ~~incorrect~~ pre sync and post sync color burst gate signals, the incorrect color burst signal and a line location signal;

- a filter coupled to the AND gate; and

a summing circuit receiving the modified front porch signal, the signals from the filter and the post pseudo sync signal, for outputting the combined signals so as to cause the color ~~enhanced chroma~~ distortion.

Claim 33 (Original). The apparatus of claim 23 including:

a line location circuit responsive to the selected sync signals for supplying a line location signal which determines which video lines are to include the selected signals combined by the combining means.

Claim 34 (Currently amended). The apparatus of claim 33 wherein the circuitry include:

a switch receiving the video signal at a first input;
a first voltage source for providing a lowered voltage level coupled to a second input of the switch;
a ~~CB~~ gate circuit for producing a ~~an incorrect~~ pre sync color burst gate signal; and
said switch being responsive to the line location signal and the ~~incorrect~~ pre sync color burst gate signal to insert the lowered voltage level into the video signal during the front porch.

Claim 35 (Currently amended). The apparatus of claim 23 including:

a timing circuit for generating a horizontal blanking interval of expanded duration; and
wherein the gate logic circuit includes a timing ~~first one-shot~~ circuits for inserting an incorrect color burst in a portion of the front porch prior to the horizontal sync.

Claim 36 (Original). The apparatus of claim 23 wherein the circuitry for lowering the level further include:

a scene detector circuit receiving the video signal for determining the average picture level; and

transfer function circuits responsive to the determined average picture level for providing one or more voltages during the selected portion of the horizontal blanking interval, which voltages vary in level in accordance with the average picture level while providing the lowered level of the selected portion.

Claim 37 (Original). The apparatus of claim 36 wherein the scene detector circuit includes:

an AC coupling circuit receiving the video signal for generating an unmodified back porch; and

a sample/hold circuit for sampling the unmodified back porch to supply the average picture level to the transfer function circuits.

Claim 38 (Original). The apparatus of claim 36 wherein transfer function circuits include:

at least one amplifier having a first input receiving the determined average picture level; and

an offset voltage source coupled to a second input of the respective amplifier, wherein the amplifier provides the lowered level for the selected portion or further portion in response to the determined average picture level.

Claim 39 (Currently amended). A method of modifying a video signal to provide a copy protection effect, the video signal including video lines having horizontal blanking intervals including horizontal sync, front porch and back porch areas of respective normal levels, and a normal color burst ~~signal~~ interval, comprising ~~the steps of:~~

generating a color burst signal of incorrect phase or frequency; and

adding the generated incorrect color burst signal to ~~the~~ a horizontal blanking interval before the horizontal sync, ~~within the horizontal sync~~ and/or after the normal color burst interval ~~signal~~.

Claim 40 (Previously added). The method of claim 39 wherein the incorrect color burst signal is added to a portion of the front porch area prior to the horizontal pulse.

Claim 41 (Previously added). The method of claim 39 wherein the incorrect color burst signal is added to a portion of the horizontal sync.

Claim 42 (Currently amended). The method of claim 39 wherein the incorrect color burst signal is added to a portion of the back porch area following the normal color burst interval ~~signal~~.

Claim 43 (Currently amended). The method of claim 39 including:

lowering the level of a portion of ~~the front porch area~~ prior to the horizontal sync;

adding a positive pulse on a the front porch area after the lowered ~~front porch~~ portion and prior to the horizontal sync; and

causing a sampling the incorrect color burst signal in response to the lowered ~~front porch~~ portion, to provide the copy protection effect.

Claim 44 (Currently amended). A method of modifying a video signal to provide a copy protection or color distortion effect, the video signal including video lines having horizontal blanking intervals including horizontal sync, and or front porch and back porch areas of ~~respective normal levels, and a normal color burst signal~~, comprising the steps of:

lowering the level of a selected portion of the end of a video line and or the front porch area prior to the horizontal sync to a value lower than the respective normal level to cause an erroneous early scan in a respective video line;

adding a color burst signal of incorrect phase or frequency to the horizontal sync and/or vicinity; and

causing a recorder or television set to sample or sense ~~sampling~~ the incorrect color burst signal ~~instead of the normal color burst signal~~ in response to the erroneous early scan, to provide the copy protection or color distortion effect.

Claim 45 (Currently amended). The method of claim 44 including:

adding a positive pulse on the front porch area after the lowered ~~front porch~~ portion and prior to the horizontal sync, wherein the lowered ~~front porch~~ portion and the positive pulse form a pseudo sync/automatic gain control (AGC) pulse pair.

Claim 46 (Currently amended). The method of claim 44 including:
generating an average picture level (APL) signal indicative of the instant average picture level; and
varying the level of the lowered ~~front porch~~ portion prior to the horizontal sync in response to the APL signal.

Claim 47 (Currently amended). A method of modifying a video signal to provide a copy protection effect, the video signal including video lines having horizontal blanking intervals including horizontal sync and or [,] front porch and back porch areas ~~of respective normal levels, and a normal color burst signal~~, comprising the steps of:

lowering the level of a selected portion of the back porch area;
adding a color burst signal of incorrect phase or frequency to the back porch area in the vicinity of the lowered back porch portion; and
providing an attenuation or darkening effect in the video signal which causes a recorder or television set to sense the lowered back porch portion thereby causing the recorder or television set to sample or sense a sampling the incorrect color burst signal in response to the lowered back porch portion, to provide the copy protection effect.

Claim 48 (Previously added). The method of claim 47 wherein the incorrect color burst signal is located after the lowered back porch portion.

Claim 49 (Previously added). The method of claim 47 wherein the incorrect color burst signal is located prior to the lowered back porch portion.

Claim 50 (Previously added). The method of claim 47 including:

generating an average picture level (APL) signal indicative of the instant average picture level; and

varying the level of the lowered back porch portion in response to the APL signal.

Claim 51 (Currently amended). A method of modifying a video signal to provide a copy protection effect, the video signal including video lines having horizontal blanking intervals including horizontal sync, and or front porch and back porch areas ~~of respective normal levels,~~ and a normal color burst signal, comprising the steps of:

adding a basic copy protection signal to the video signal to cause an attenuation or darkening effect;

lowering the level of a selected portion or portions of the horizontal blanking interval and or the end of a video line to a value lower than said respective normal level;

~~causing a sample signal in response to the lowered level in the selected portion;~~

inserting a color burst signal of incorrect phase or frequency in a second portion of the horizontal blanking interval; and

wherein the second portion is spatially arranged in respect of the selected portion such that the attenuation or darkening effect causes the sensing of the lowered portion or portions to cause sampling or sensing the sample signal to sample the incorrect color burst signal rather than the normal color burst signal, to provide the copy protection effect.

Claim 52 (Currently amended). The method of claim 51 wherein the incorrect color burst signal is added to the end of a video line, to a front porch area, to a the horizontal sync signal and/or to a the back porch area so as to cause the sampling of the incorrect color burst signal by a recorder or television set.

Claim 53 (Currently amended). The method of claim 52 wherein the incorrect color burst signal is added to a portion of the horizontal sync signal, and or the selected portion which is lowered in level is in a portion of the front porch area and or in the end of a video line.

Claim 54 (Currently amended). The method of claim 52 wherein the incorrect color burst signal is added to the back porch area, and or the selected portion which is lowered in level is a pseudo sync signal inserted in a portion of the back porch area prior to the incorrect color burst signal.

Claim 55 (Previously added). The method of claim 52 including:
expanding the duration of the horizontal blanking interval; and
inserting an incorrect color burst signal in a portion of the front porch area following the lowered level.

Claim 56 (Previously added). The method of claim 52 wherein:
the incorrect color burst signal is added to the horizontal sync signal, and the selected portion which is lowered in level is a pseudo sync signal on ~~the~~ a back porch area following the incorrect color burst signal and adjacent the beginning of the respective active video line.

Claim 57 (Previously added). The method of claim 52 including:

superimposing a positive pulse on the front porch area prior to the horizontal sync signal;

and

wherein the selected signal which is lowered in level is a portion of the front porch area.

Claim 58 (Currently amended). Apparatus for modifying a video signal to provide a copy protection effect during reproduction of an illegal copy, the video signal including video lines having horizontal blanking intervals ~~with normal levels of horizontal sync, front porch and back porch and a normal color burst~~, comprising:

circuitry for lowering the level of at least a selected portion of the horizontal blanking interval to below the normal level;

~~subcarrier~~ generator/combining circuits for supplying a color burst of incorrect phase or frequency in a further portion of the horizontal blanking interval; and

wherein said further portion is positioned in respect of the selected portion to cause a recorder or television set to sense the lowered level of the selected portion and to thereby sample ~~sampling of the incorrect color burst rather than of the normal color burst~~, so as to provide the copy protection effect.

Claim 59 (Currently amended). The apparatus of claim 58 wherein the circuitry include:

a first voltage source for lowering the normal level of a portion or portions of the front porch to provide a modified front porch signal.

Claim 60 (Previously added). The apparatus of claim 58 wherein the circuitry include:
a second voltage source for providing a post pseudo sync signal of lowered level during the back porch.

Claim 61 (Previously added). The apparatus of claim 60 wherein the second voltage source provides a post pseudo sync amplitude of about -10 to -30 IRE.

Claim 62 (Currently amended). The apparatus of claim ~~58~~ 61 wherein the ~~subcarrier~~ generator/combining circuits include:

a generator ~~an oscillator~~ for supplying color burst signals of the incorrect phase or frequency; and

a combining circuit for combining with the video signal, selected signals of a the modified front porch ~~signal~~, the end of a video line, the post pseudo sync signal and or the ~~incorrect~~ color burst in response to the incorrect pre sync and post sync color burst gate signals, to provide the copy protection effect.

Claim 63 (Currently amended). The apparatus of claim 58 including:

a timing circuit for generating a horizontal blanking interval of expanded duration which extends into a portion of an active video line.

Claim 64 (Previously added). The apparatus of claim 58 wherein the circuitry for lowering the level further include:

a scene detector circuit receiving the video signal for determining the average picture level; and

transfer function circuits responsive to the determined average picture level for providing one or more voltages during the selected portion of the horizontal blanking interval, which voltages vary in level in accordance with the average picture level while providing the lowered level of the selected portion.

Claim 65 (Previously added). The apparatus of claim 58 including means for adding a positive pulse on a selected portion of the front porch area and prior to the horizontal sync.

Claim 66 (New). The method of claim 1 including modifying the duration of a horizontal blanking interval and or the width of a horizontal sync signal.

Claim 67 (New). The method of claim 44 further including:
adding a basic copy protection signal to the video signal to cause an attenuation or darkening effect; and
wherein the attenuation or darkening effect causes the recorder or television set to sense the lowered portion or portions thereby causing the sampling or sensing of the incorrect color burst.

Claim 68 (New). The method of claim 51 including expanding the horizontal blanking interval to include an end or beginning of an active video line.

Claim 69 (New). The method of claim 51 wherein one or more horizontal blanking intervals are widened and or one or more horizontal sync pulses are modified in width.

Claim 70 (New). The method of claim 51 wherein the level of the lowered portion or portions is in the range of about blanking level to -30 IRE or minus 30% white level.

Claim 71 (New). The apparatus of claim 58 wherein the timing circuit generates one or more horizontal sync signal of selectively modified width.

Claim 72 (New). A method of applying chroma distortion in a video signal supplied to a television set and or recorder, wherein the video signal is formed of video lines having horizontal blanking intervals and includes a basic copy protection signal that causes an attenuation or darkening effect, comprising:

lowering a portion or portions of the end of the video line and or of the horizontal blanking interval of the copy protected video signal;

inserting a color burst signal of incorrect phase or frequency in a second portion or portions of the horizontal blanking interval; and

wherein the lowered portion or portions are sensed by a television set or recorder in response to the attenuation or darkening effect of the basic copy protection signal, and wherein the sensing of the lowered portion or portions causes a sampling or sensing of the incorrect color burst signal by the television set or recorder, thereby resulting in the chroma distortion.

Claim 73 (New). The method of claim 72 including changing the pulse width of a horizontal sync pulse.

Claim 74 (New). The method of claim 72 including changing the duration of the horizontal blanking interval.

Claim 75 (New). The method of claim 72 wherein at least one lowered portion has a level in the range of about blanking level to -30 IRE.

Claim 76 (New). A method of enhancing the initial attenuation or darkening effect caused by a basic copy protection signal, comprising:

adding or inserting a negative going pulse in the vicinity of the beginning of an active video line, whereby the negative going pulse is sensed by a recorder or television set in response to the initial attenuation or darkening effect of the video signal caused by the basic copy protection signal, thereby causing further attenuation or darkening of the video signal beyond the initial attenuation or darkening effect to enhance the basic copy protection signal.

Claim 77 (New). The method of claim 76 wherein the negative going pulse has a negative level above a normal sync tip level, not to exceed minus 30% white level.

Claim 78 (New). A method of modifying an effect of a basic copy protection signal in a video signal having video lines, wherein the basic copy protection signal includes AGC pulses for causing an attenuation or darkening effect, comprising:

lowering a portion or portions of the end of the video line or of the horizontal blanking interval of a video signal;

adding or inserting a positive going pulse after the lowered portion or portions; and

wherein the attenuation or darkening effect of the basic copy protection signal causes the sensing of the lowered portion or portions and of the positive going pulse, to further increase the attenuation or darkening effect of the basic copy protection process.

Claim 79 (New). The method of claim 78 wherein because of the initial attenuation or darkening caused by the AGC pulses of the basic copy protection process, the lowered portion or portions is sensed as a pseudo sync pulse and the positive going pulse is sensed as an AGC pulse, causing the further increase in the AGC or darkening effect on a recorder or television set.

Claim 80 (New). The method of claim 78 wherein the level of the lowered portion or portions does not go below minus 30% white level, such that with generally normal video levels the recorder or television set senses normal sync pulses, and under attenuated or darkened video levels the recorder or television set senses the lowered portion or portions.

Claim 81 (New). A method of increasing the concealment effect of a video scrambling signal in a video signal having horizontal blanking intervals with sync pulses and color bursts, comprising:

suppressing selected sync pulses in the video signal;

replacing a portion or portions just outside the horizontal blanking interval with a signal of predetermined level; and

adding a color burst of incorrect phase to at least a portion of a sync pulse interval or to at least a portion of a back porch interval, thereby increasing color distortion in the resulting modified sync pulse suppressed video scrambling signal.

Claim 82 (New). A method of synthesizing a video copy protection signal in a video signal, comprising:

adding a basic copy protection signal having automatic gain control (AGC) pulses to the video signal;

lowering the level of at least a portion of an active video line or a horizontal blanking interval of the video signal;

adding a color signal of incorrect phase or frequency within the horizontal blanking interval; and

sensing the lowered portion in a recorder or television set in response to an attenuation or darkening effect caused by the AGC pulses in the basic copy protection signal, which causes the recorder or television set to sample or sense the incorrect color signal, thereby providing color distortion.

Claim 83 (New). The method of claim 82 wherein the color distortion is displayed on a television set upon playing back an illegal copy of the copy protected video signal.

Claim 84 (New). The method of claim 82 further including:

modifying the duration of a horizontal sync pulse and or a horizontal blanking interval.

Claim 85 (New). A method of synthesizing at least part of a video copy protection signal, comprising:

adding a basic copy protection signal;

lowering the level of a selected portion or portions at the end of a video line and or in a front porch area;

adding a positive going signal prior to a sync pulse; and

wherein the lowered portion or portions and positive going signal are sensed by a television set or recorder in response to the basic copy protection signal.